

Remarks

Claims 1-7 and 9-20 are pending in the application. Claim 8 has been canceled hereinabove without prejudice to or disclaimer of the subject matter therein. Claims 18-20 are newly added. Claims 1-7 and 9-17 stand rejected.

Claims 1-7 and 9-16 were rejected under 35 USC 102(b) as being anticipated by Yamauchi et al. (US 5,927,244) (hereafter, "Yamauchi"). Further, claims 1-17 were rejected under 35 USC 102(b) as being anticipated by Yoshikawa et al. (US 5,816,215) (hereafter, "Yoshikawa").

The Applicant respectfully submits that neither of the cited references supports the asserted rejection for at least the reason that neither references discloses "the injection port is located in a part of the inner wall that is close to the periphery of the cylinder" and the "the notch has a nearest portion, which is nearest to the adjacent valve opening, and the nearest portion is displaced from the first line" as recited in independent claims 1 and 9.

The claimed feature is illustrated, for example, in the present application in Fig. 3(B). As shown in Fig. 3(B), the nearest portion corresponds to a portion of the notch 18a-1 indicated by an arrow D1. The shortest distance D1 between the notch 18a-1 and the intake opening 12a-1 is greater than the shortest distance D2 between the imaginary notch 118 and the intake opening 12a-1. The imaginary notch 118 has the same size as the notch 18a-1 and has a nearest portion (T2) located on the first line L1-1. Since the nearest portion of the notch 18a-1 is displaced from the first line L1-1, the notch 18a-1 prevents the thickness of a valve seat of the first intake valve 6-1 from being reduced. Therefore, a sufficient thickness of the valve seat of the first intake valve 6-1 is easily ensured (please see, for example, the present specification at page 7, lines 16-21).

By contrast, Yoshikawa discloses that the external edge of the opening 60b of the injection passage 60 extends along the external edge of the intake opening 13a (see col. 6, lines 11-13 and Fig. 3). That is, a nearest portion of the notch (opening 60b) of the structure shown in Yoshikawa extends along the external edge of the intake opening 13a and is located on the first line that passes through a center of the injection passage 60 and a center of the intake opening 13a. Accordingly, Yoshikawa cannot

meet the recitations of present independent claims 1 and 9. Moreover, Yamauchi is silent as to the claimed arrangement. Claims 1 and 9 are therefore allowable over Yamauchi and Yoshikawa.

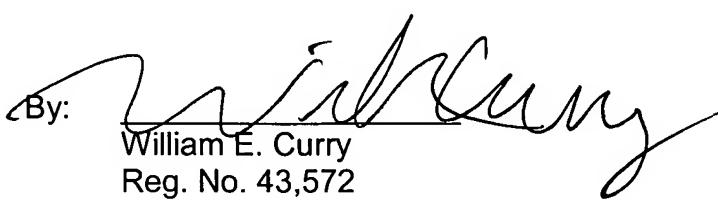
The dependent claims include the recitations of the independent claims by dependency thereon, and accordingly are allowable over Yamauchi and Yoshikawa for at least the reasons discussed in connection with the independent claims. In view of the foregoing, withdrawal of the asserted rejections based on 35 USC 102(b) is respectfully requested.

Claims 18-20 are newly added. New claims 19 and 20 recite that the cylinder head (3) has an injector accommodating hole (15) accommodating the injector (14). The injection port (17) connects the injector accommodating hole (15) with the combustion chamber (4). The injector (14) injects fuel in a direction (19) that is inclined relative to the axis (16) of the injector accommodating hole (15). The notch (18a-1, 18a-2) extends along the direction (19) of the fuel injection, as shown in Fig. 2. By contrast, Yoshikawa discloses that the fuel spray 51 injects fuel in a direction along the axis of the injection passage 60 as shown in Figs. 2 and 4.

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: DEC. 10, 2004 By: 
William E. Curry
Reg. No. 43,572

KENYON & KENYON
1500 K Street, N.W., Suite 700
Washington, D.C. 20005
Tel: (202) 220-4200
Fax:(202) 220-4201